Response to June 22, 2006 Office Action

Application No. 09/944,192

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IN THE CLAIMS

Please substitute claims 1-40 with the following:

1. (Currently Amended) A person authentication system for executing person authentication by comparing a template which is person identification data acquired beforehand with sampling information input by a user, said system comprising:

an acquisition unit for acquiring an encrypted template from a person identification certificate including said encrypted template and generated by a third-party agency serving as a person identification certificate authority;

a receiving unit for receiving said encrypted template from said person identification certificate authority and an encrypted sampling information from said user;

a decrypting unit for decrypting said encrypted template and encrypted sampling information; and

a person authenticating unit for executing person authentication by comparing said decrypted template with said decrypted sampling information[[;]],

wherein,

said encrypted sampling information is generated using a public key certificate generated by a certificate authority; and

when transmitting said person identification certificate to said person authentication system, said person identification certificate authority

- (a) retrieves a stored encrypted template,
- (b) <u>decrypts the stored encrypted template using a private key of the person</u> identification certificate authority,

- (c) <u>re-encrypts the decrypted template using a public key of said person</u> authentication system to which said person identification certificate is to be transmitted, and
 - (d) stores the re-encrypted template in said person identification certificate.
- 2. (Original) A person authentication system according to Claim 1, wherein the person identification certificate issued by said person identification certificate authority includes a digital signature written by said person identification certificate authority.
- 3. (Original) A person authentication system according to Claim 1, wherein said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued, acquires a template serving as person identification data of said person requesting the person identification certificate to be issued, and generates a person identification certificate storing template information including said template.
- 4. (Previously Presented) A person authentication system according to Claim 1, wherein, in the process of acquiring the person identification certificate from said person identification certificate authority, said person authentication system performs mutual authentication between said person authentication system and said person identification certificate authority, and said person identification certificate authority transmits the person identification certificate, provided that said mutual authentication is successfully completed.
- 5. (Original) A person authentication system according to Claim 1, wherein said person identification certificate authority stores said template in said person identification certificate after encrypting said template.
- 6. (Previously Presented) A person authentication system according to Claim 1, wherein said person authentication system is any one of a service provider which provides

services to a user identified by said person identification certificate, a user device accessed by a user identified by said person identification certificate, and said person identification certificate authority.

- 7. (Canceled)
- 8. (Previously Presented) A person authentication system according to Claim 1, wherein said person authentication system a service provider which provides services to a user identified by said person identification certificate, and

wherein said service provider compares a template, which is acquirable from the person identification certificate acquired from said person identification certificate authority, with sampling information provided by the user and starts providing services to the user, provided that said template and said sampling information match with each other.

9. (Previously Presented) A person authentication system according to Claim 1, wherein said person authentication system is a user device serving as a data processing apparatus including data accessible by a user identified by said person identification certificate, and

wherein said user device compares a template, which is acquirable from the person identification certificate acquired from said person identification certificate authority, with sampling information provided by the user, and said user device allows the user to start accessing said user device, provided that said template and said sampling information match with each other.

10. (Previously Presented) A person authentication system according to Claim 1, wherein said template is composed any one of: biometric information; non-biometric

information; any combination of two or more of said biometric information and said nonbiometric information; and a combination of any of said information and a password.

11. (Previously Presented) A person authentication system according to Claim 1, wherein said person authentication system and said person identification certificate authority have an encryption processing unit, respectively, and

wherein, when data is transmitted there between, mutual authentication is performed between said person authentication system and said person identification certificate authority, a data-transmitting party generates a digital signature and adds it to data to be transmitted, and a data-receiving party verifies the digital signature.

12. (Currently Amended) A person authentication system for executing person authentication by comparing a template which is person identification data acquired beforehand with sampling information input by said person, said system comprising a person identification certificate authority which (a) acquires an encrypted template from a person identification certificate including said encrypted template, (b) receives said encrypted template from said person identification certificate authority and an encrypted sampling information from said person, (c) decrypts said encrypted template and said encrypted sampling information, (d) executes person authentication by comparing said decrypted template with said decrypted sampling information, and (e) issues a verification certificate, provided that said person authentication is successfully passed;

wherein,

said encrypted sampling information is generates generated using a public key certificate generated by a certificate authority; and

when transmitting said person identification certificate to said person authentication system, said person identification certificate authority (i) retrieves a stored encrypted template, (ii) decrypts the stored encrypted template using a private key of the person identification certificate authority, (iii) re-encrypts the decrypted template using a public key of said person authentication system to which said person identification certificate is to be transmitted, and (iv) stores the re-encrypted template in said person identification certificate.

- 13. (Original) A person authentication system according to Claim 12, wherein the verification certificate issued by said person identification certificate authority includes a digital signature written by said person identification certificate authority.
- 14. (Original) A person authentication system according to Claim 12, wherein said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued, acquires a template serving as person identification data of said person requesting the person identification certificate to be issued, and generates a person identification certificate storing template information including said template.
- 15. (Previously Presented) A person authentication system according to Claim 12, wherein, in the process of acquiring the verification certificate from said person identification certificate authority, said person authentication system performs mutual authentication between said person authentication system and said person identification certificate authority, and said person identification certificate authority transmits the verification certificate, provided that said mutual authentication is successfully completed.
- 16. (Previously Presented) A person authentication system according to Claim 12, wherein said person authentication system acquiring the verification certificate is one of a

service provider which provides services to a user identified by said person identification

certificate, and a user device accessed by a user identified by said person identification

certificate.

17. (Previously Presented) A person authentication system according to Claim 12,

wherein said person authentication system acquiring the verification certificate is a service

provider which provides services to an user, and

wherein said service provider starts providing services to the user, provided that the

verification certificate is successfully acquired from said person identification certificate

authority.

18. (Previously Presented) A person authentication system according to Claim 12,

wherein said person authentication system acquiring the verification certificate is a user device

serving as a data processing apparatus including data accessible by an user, and

wherein said user device allows the user to start accessing said user device, provided that

the verification certificate is successfully acquired from said person identification certificate

authority.

19. (Previously Presented) A person authentication system according to Claim 12,

wherein said person authentication system acquiring the verification certificate verifies the

signature of said verification certificate acquired from said person identification certificate

authority and deletes said verification certificate after confirming that said verification of the

signature indicates the validity of said verification certificate.

20. (Previously Presented) A person authentication system according to Claim 12,

wherein said template is composed any one of: biometric information; non-biometric

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information; any combination of two or more types of said biometric information and said non-biometric information; and a combination of any of said information and a password.

21. (Currently Amended) A person authentication method for executing person authentication by comparing a template which is person identification data acquired beforehand with sampling information input by a user, said method comprising the steps of:

acquiring an encrypted template from a person identification certificate including said template and generated by a third-party agency serving as a person identification certificate authority;

receiving said encrypted template from said person identification certificate authority and an encrypted sampling information from said user;

decrypting said encrypted template and said encrypted sampling information; comparing said decrypted template with said decrypted sampling information, and executing person authentication on the basis of the acquired template; wherein,

said encrypted sampling information is generated using a public key certificate generated by a certificate authority; and

when transmitting said person identification certificate to said person authentication system, said person identification certificate authority

- (a) retrieves a stored encrypted template,
- (b) <u>decrypts the stored encrypted template using a private key of the person</u> identification certificate authority,

- (c) re-encrypts the decrypted template using a public key of said person authentication system to which said person identification certificate is to be transmitted, and
 - (d) stores the re-encrypted template in said person identification certificate.
- 22. (Original) A person authentication method according to Claim 21, wherein said person identification certificate authority writes a digital signature on the person identification certificate issued by said person identification certificate authority.
- 23. (Original) A person authentication method according to Claim 21, wherein said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued, acquires a template serving as person identification data of said person requesting the person identification certificate to be issued, and generates a person identification certificate storing template information including said template.
- 24. (Previously Presented) A person authentication method according to Claim 21, wherein, in the process of acquiring the person identification certificate from said person identification certificate authority, said person authentication system performs mutual authentication between said person authentication system and said person identification certificate authority, and said person identification certificate authority transmits the person identification certificate, provided that said mutual authentication is successfully completed.
- 25. (Original) A person authentication method according to Claim 21, wherein said person identification certificate authority stores said template in said person identification certificate after encrypting said template.
 - 26. (Canceled)

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27. (Previously Presented) A person authentication method according to Claim 21,

wherein said person authentication system is a service provider which makes a deal with a user

identified by said person identification certificate, and

wherein said service provider compares a template, which is acquirable from a person

identification certificate acquired from said person identification certificate authority, with

sampling information provided by the user, and starts making a deal with the user, provided that

said template and said sampling information match with each other.

28. (Previously Presented) A person authentication method according to Claim 21,

wherein said person authentication system is a user device serving as a data processing apparatus

including data accessible by a user identified by said person identification certificate, and

wherein said user device compares a template, which is acquirable from a person

identification certificate acquired from said person identification certificate authority, with

sampling information provided by the user, and said user device allows the user to start accessing

said user device, provided that said template and said sampling information match with each

other.

29. (Currently Amended) A person authentication method for executing person

authentication by comparing a template which is a person identification data acquired beforehand

with sampling information input by a user, wherein, comprising receiving, at a person

identification certificate authority which acquires an encrypted template from a person

identification certificate including said encrypted template, receives said encrypted template

from said person identification certificate authority and an encrypted sampling information from

said user; decryptis decrypting said encrypted template and said encrypted sampling information,

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and executes executing person authentication by comparing said decrypted template with said

decrypted sampling information, wherein a verification certificate is issued provided that said

person authentication is successfully passed; wherein said encrypted sampling information is

generates generated using a public key certificate generated by a certificate authority; and

wherein, when transmitting said person identification certificate to said person authentication

system, said person identification certificate authority retrieves a stored encrypted template,

decrypts the stored encrypted template using a private key of the person identification certificate

authority, re-encrypts the decrypted template using a public key of said person authentication

system to which said person identification certificate is to be transmitted, and stores the re-

encrypted template in said person identification certificate.

30. (Original) A person authentication method according to Claim 29, wherein

said person identification certificate authority writes a digital signature on the verification

certificate issued by said person identification certificate authority.

31. (Original) A person authentication method according to Claim 29, wherein

said person identification certificate authority verifies the identification of a person requesting a

person identification certificate to be issued, acquires a template serving as person identification

data of said person requesting the person identification certificate to be issued, and generates a

person identification certificate storing template information including said template.

32. (Previously Presented) A person authentication method according to Claim 29,

wherein, in the process of acquiring said verification certificate from said person identification

certificate authority, said person authentication system performs mutual authentication between

said person authentication system and said person identification certificate authority, and said

person identification certificate authority transmits the verification certificate, provided that said mutual authentication is successfully completed.

33. (Previously Presented) A person authentication method according to Claim 29, wherein said person authentication system acquiring the verification certificate is a service provider which provides services to an user, and

wherein said service provider starts providing services to the user, provided that the verification certificate is successfully acquired from said person identification certificate authority.

34. (Previously Presented) A person authentication method according to Claim 29, wherein said person authentication system acquiring the verification certificate is a user device serving as a data processing apparatus including data accessible by an user, and

wherein said user device allows the user to start accessing said user device, provided that the verification certificate is successfully acquired from said person identification certificate authority.

- 35. (Previously Presented) A person authentication method according to Claim 29, wherein said person authentication system verifies the signature of said verification certificate acquired from said person identification certificate authority and deletes said verification certificate after confirming that said verification of the signature indicates the validity of said verification certificate.
- 36. (Currently Amended) An information processing apparatus for executing person authentication by comparing a template which is person identification data acquired beforehand with sampling information input by a user, comprising an authentication system wherein an

encrypted template is acquired from a person identification certificate generated by a third-party agency serving as a person identification certificate authority, the encrypted template is decrypted, and person authentication is executed by comparing said decrypted template with said sampling information; wherein said sampling information is received in an encrypted form from said user and decrypted prior to comparing with said decrypted template; and wherein said encrypted sampling information is generated using a public key certificate generated by a certificate authority; and wherein, when transmitting said person identification certificate to said person authentication system, said person identification certificate authority retrieves a stored encrypted template, decrypts the stored encrypted template using a private key of the person identification certificate authority, re-encrypts the decrypted template using a public key of said person authentication system to which said person identification certificate is to be transmitted, and stores the re-encrypted template in said person identification certificate.

- 37. (Original) An information processing apparatus according to Claim 36, wherein the person identification certificate issued by said person identification certificate authority includes a digital signature written by said person identification certificate authority, and said information processing apparatus verifies the digital signature to check whether or not data has been tampered with.
- 38. (Original) An information processing apparatus according to Claim 36, wherein, in the process of acquiring a person identification certificate from said person identification certificate authority, said information processing apparatus performs mutual authentication between said information processing apparatus and said person identification certificate

authority, and said information processing apparatus receives the person identification certificate,

provided that said mutual authentication is successfully completed.

39. (Original) An information processing apparatus according to Claim 36, wherein

said information processing apparatus compares a template, which is acquirable from the person

identification certificate acquired from said person identification certificate authority, with

sampling information provided by the user, and said information processing apparatus starts

performing a process requested by the user, provided that said template and said sampling

information match with each other.

40. (Currently Amended) A program providing computer storage medium for

providing storing a computer program which executes, on a computer system, a person

authentication process for executing person authentication by comparing a template which is

person identification data acquired beforehand with sampling information input by a user, said

computer program comprising the steps of:

acquiring an encrypted template from a person identification certificate generated by a

third-party agency serving as a person identification certificate authority;

receiving said encrypted template from said person identification certificate authority and

an encrypted sampling information from said user;

decrypting said encrypted template and said encrypted sampling information; and

executing person authentication by comparing said decrypted template with said

decrypted sampling information;

wherein,

said encrypted sampling information is generated using a public key certificate generated by a certificate authority; and

when transmitting said person identification certificate to said person authentication system, said person identification certificate authority

- (a) retrieves a stored encrypted template,
- (b) <u>decrypts the stored encrypted template using a private key of the</u> person identification certificate authority,
- (c) re-encrypts the decrypted template using a public key of said person authentication system to which said person identification certificate is to be transmitted, and
- (d) <u>stores the re-encrypted template in said person identification</u> certificate.